

REMARKS

Claims 1 and 32-34 have been cancelled without prejudice. Claims 35 and 36 have been added to the present application. Claim 1 has been replaced by claim 35, which has the same content as previous Claim 1 with the exception that the step of treating the stock with a cationic retention agent has been separated into a passage which defines the contribution to the technique employed. The cationic retention agent has also been defined as a cationic polymer having a molecular weight of at least 500,000 g/mol, this limitation being taken from Claim 25 as filed. Further, the filtering and drying steps have also been recited in the claims, because these measures are performed on the treated stock, which is new *per se*.

New Claim 36 is based on previous Claim 32, now deleted, with the original colloid definition and the new retention agent definition, taken from original Claim 25, as well as the filtering and drying steps.

Thus, there is no new matter in the claims as amended.

Claim Objections — 37 CFR 1.75(c)

Because of certain objections, most notably improper multiple dependent Claim 3 in the original application, the Examiner withdrew Claims 7-31 from consideration. Since the objections have been overcome, Claims 2-31, 35 and 36 are pending and are presented for substantive examination at this time.

The original claims were objected to because of certain minor informalities. These informalities have been corrected. Specifically, the improper multiple dependencies have

been eliminated, and certain clerical amendments have been made to improve the format of the case in accordance with U.S. practice. Hence, withdrawal of the objections is requested.

Claim Rejections -- 35 USC § 102

Claims 33 and 34 stand rejected under 35 USC § 102(b) as being anticipated by Freeman et al., U.S. 5,551,975. In order to overcome this rejection, the Applicant has deleted claims 33 and 34.

Claim Rejections — 35 USC § 103

Claims 1-4 and 6 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Freeman et al, USP 5,551,975 ('975), in view of Satterfield et al. USP 5,755,930 ('930). Claims 5 and 32 have been rejected under 35 USC 103(a) over Freeman '975 in view of Satterfield et al '930, and in further view of Neivandt et al, U.S. Patent Publication 2005/0150621 ('621). These rejections are respectfully traversed. Reconsideration and withdrawal of these rejections are respectfully requested.

In order to overcome the obviousness rejections, the applicant has filed a set of amended claims; see above.

As disclosed on page 1, line 28 to page 2, line 10 of the present application, in the prior art the cationic retention polymer has first been added to the stock (fibers+filler+water) while the anionic colloid has been added later. However, this prior known technique has led to hard floccules and visually detectable spots on the paper. Now, applicant has surprisingly found that by treating first the filler with the anionic colloid, then combining the treated filler with a cellulose fiber suspension, and finally treating the obtained stock with a cationic retention

polymer; the hard floccules and visually detectable spots can be eliminated. The order of treatment is essential.

Neither of the cited references, US 5,551,975 and US 5,755,930, nor a combination of them, disclose the claimed process.

According to paragraphs 10-18 of the Office Action, as noted above, claims 1-4 and 6 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Freeman *et al.*, US 5,551,975 in view of Satterfield *et al.*, US 5,755,930.

As set forth in paragraphs 11 to 14 of the Office Action, the '975 patent teaches the pretreatment and suspension of a filler to form an aqueous slurry (Col. 4, lines 17-19), the aqueous slurry being combined with a cellulose fiber suspension to form a stock (Col. 6, line 36), and the stock is treated at least with a cationic retention agent (clay, Col. 3, line 49) wherein the pretreatment is carried out with inorganic colloidal particles (liquid colloidal silica, Col. 3, line 67) having an average particle size of < 100 nm (7-22 nm, Col. 4, lines 9-11). According to the Examiner, the '975 patent does not teach filtering or drying, but the '930 patent does. As paper does not form without filtering and drying, the Examiner concludes that a combination of '975 and '930 is inevitable and makes claim 1 obvious.

Neither '975 nor '930 disclose the step of treating the stock (pre-treated filler+cellulose fiber +water) with a cationic retention agent. The Examiner has referred to Col. 3, line 49 of the '975 patent. In that passage, however, only the pretreatment of the filler (clay) is described. Not a word is mentioned about treatment with retention agents. Thus, neither reference discloses or suggests that the stock obtained in the claimed process is treated with a cationic retention agent.

The '975 patent merely describes filler pretreatment, which has nothing to do with the claimed addition of a cationic retention agent. Further, the clay referred to by the Examiner is not even a cationic retention agent. Applicant refers to page 7, lines 15-25, as well as claims 25-27, of the present application. According to these passages, the cationic agents are not clays, but preferably cationic polymers having a molecular weight of at least 500,000 g/mol. Clay is not mentioned as a cationic retention agent. In order to overcome the '975 and '930 patents, Applicants have now included this specification of the cationic retention agent in the main claims.

Regarding paragraphs 15 to 18 of the Office Action, they relate to preferred embodiments of the unobvious invention of the claims, see above, and therefore also comply with 35 U.S.C.103(a).

The same applies to paragraphs 19 to 22 of the Office Action. Claim 5 is dependent on Claim 1 and therefore defines a preferred embodiment of the unobvious invention as set forth in Claim 1. The reference of Neivandt et al., US 2005/0150621, allegedly teaching the use of montmorillonite and bentonite [0026] based pretreatment colloids, is in applicant's view irrelevant. As stated above in connection with Claim 1, the invention lies in the combination of an initial filler pretreatment and a final stock retention treatment, which is not disclosed by any of the cited references.

Paragraphs 23 to 29 of the Office Action relate to the obviousness of Claim 32 as originally filed. Claim 32, now replaced by Claim 36, defines a papermaking process involving the combination of initially pretreating titanium dioxide filler with 1-25 nm magnesium silicate and finally improving stock retention with a $> 500,000$ g/mol of cationic polymer. Allegedly, the '621 reference teaches the use of a magnesium silicate (talc, [0024]) for treating fillers. However, it is shown above that the cited references do not disclose the claimed combination of initial filler pretreatment and final stock retention treatment. New claim 36 differs from original

Application No. 10/553,358
Amendment dated January 21, 2009
Reply to Office Action of September 19, 2008

Docket No.: 0696-0224PUS1

claim 1 (see above) only in that the filler and the pretreatment colloid are specified, and is therefore also unobvious over the references.

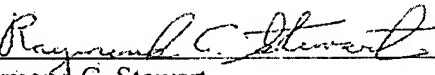
It is respectfully submitted that a combination of '975, '930 and '621 fails to teach or suggest all the features of the claimed invention. Therefore, applicant believes that the amended claims are non-obvious, and respectfully requests that this rejection be withdrawn.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Raymond C. Stewart Reg. No. 21,066 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

Dated: January 21, 2009

Respectfully submitted,

By 
Raymond C. Stewart
Registration No.: 21,066
BIRCH, STEWART, KOLASCH & BIRCH, LLP
8110 Gatehouse Road
Suite 100 East
P.O. Box 747
Falls Church, Virginia 22040-0747
(703) 205-8000
Attorney for Applicant